

CENTER FOR ADVANCED STUDY IN THE BEHAVIORAL SCIENCES

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25 June 1974

To: O. Meredith Wilson, Director

From: A POSTS Group: The Historical Sociology of Scientific Knowledge  
Yehuda Elkana  
Joshua Lederberg  
Robert K. Merton  
Arnold Thackray  
Harriet Zuckerman

About: A First Inventory of the 'Tangible Results' of our Joint Fellowship

This deals only with the first item in your memorandum asking Fellows to evaluate their year at the Center. Since part of this year represented for us a corporate fellowship, with tangible results growing out of that collaboration, we thought it would be convenient to summarize these for the group as a whole, rather than have each of us report these same outcomes.

[1] THE HISTORY, PHILOSOPHY AND SOCIOLOGY OF SCIENCE: Classics, Staples and Precursors

Four of the group -- all but Josh Lederberg -- have put together an annotated collection of some 60 volumes which is being re-printed by the Arno Press (expected publications: early 1975). As the title intimates, the collection includes basic contributions and exemplars published in this composite field over the last three centuries. To arrive at the final list, the group prepared a first classified list of about 250 volumes. The process of sifting this long list on the basis of intensive discussions was itself a valuable learning experience for all of us.

We append the short Introduction to the collection in the thought that it might give some idea of what we were up to.

[2] SCIENCE INDICATORS: A Case in the Applied Sociology, History and Philosophy of Science

This book, which is being edited by all five members of the POSTS group, grows out of the conference held at the Center in mid-June 1974 under the joint auspices of POSTS and the Social Science Research Council. Based on papers presented at the conference, to be supplemented by others which were generated by the discussion, the volume sets out the problems and prospects of developing measures of cognitive and social developments in science.

Negotiations are well along with John Wiley & Sons for publication in late Spring or Summer of 1975, with royalties to be shared equally by the Center and by the SSRC.

[3] THE GROWTH OF SCIENTIFIC KNOWLEDGE: BACTERIAL GENETICS AS A PROTOTYPAL CASE IN THE HISTORICAL SOCIOLOGY OF SCIENCE

The group began discussions of cognitive and social processes in the development of scientific knowledge at the beginning of the Center year. Having decided to work toward the goal of developing an analytical and interpretative framework through the study of cases in point, we elected to focus on the case of Joshua Lederberg's discovery in 1947 of sexual recombination in bacteria and his subsequent research on transduction, which laid the foundation for the new specialty of bacterial genetics.

The investigation is based upon focussed interviews with participants in the scientific development, publications and unpublished documents, including a detailed, heavily personal account developed by Lederberg in interaction with his interviewers (a kind of material that combines the techniques of oral history and documentary analysis). Some of this case study has already been reported in

Joshua Lederberg, the Phi Beta Kappa Lecture, American Association for the Advancement of Science, February 1973

and another result of this work will be reported in

Harriet Zuckerman, "The Emergence of a New Scientific Paradigm: Bacterial Genetics as a Prototypical Case," Annual Meeting of the American Sociological Association, August 29, 1974, Montreal

Work continues, however, and its full fruition will run over into next year.